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ABSTRACT

Acceptability of classroom interventions for behavior problems was assessed by having 180 preservice and student teachers read case studies involving intervention and then judged the intervention's acceptability by completing the Intervention Rating Profile, an assessment instrument designed to evaluate acceptability of an intervention in terms of five factors (whether it was generally acceptable, whether it posed undue risk to the child, whether it required excessive teacher time, whether it had negative effects on nontarget children, and whether it required overly high levels of teacher skill). Among major conclusions were that the determination of acceptability embodied the five components, that a teacher's decision to use an intervention appeared to be based on consideration of a complex array of factors, and that the Intervention Rating Profile appeared sensitive to variables influencing teachers' perceptions and possible utilization of an intervention. (CL)

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Acceptability of Behavioral Interventions Used in Classrooms: The Influence of Amount of Teacher Time, Severity of Behavior Problem, and Type of Intervention

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Abstract

This article explores factors which are related to teacher judgements that an intervention is either acceptable or unacceptable for use in typical classroom environments. The acceptability of various interventions was assessed by having 180 preservice and student teachers read case studies involving a classroom intervention and then judge the acceptability of the intervention according to five factors. The five factors included whether the intervention was considered generally acceptable, whether it posed undue risk to the child, whether it required excessive teacher time, whether it had negative effects on nontarget children, and whether it required such high levels of teacher skill that the typical teacher could not implement it. The major outcomes of the study included: (a) the determination that acceptability of a classroom intervention is not a unitary concept, rather it embodies five components; (b) the construction of a reliable instrument for assessing the acceptability of classroom interventions; and (c) the finding that various interventions differ markedly in their acceptability. Results are discussed in terms of their relevance to developing interventions which are effective and yet can be utilized by harried classroom teachers. Future studies are also outlined.

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Acceptability of Behavioral Interventions Used in Classrooms: The Influence of Amount of Teacher Time Severity of Behavior Problem, and Type of Interventions

A primary concern of teachers is control of behavior problems within their classrooms (Lambert, 1976). Frequently, psychologists consult with classroom teachers to develop strategies for overcoming these problems; however, our experience has been that teachers often object to or resist many of the suggested interventions. A frequent teacher complaint is, "I have 30 kids in class and I just can't take that much time for one or two students." A central tenet of this paper is that this and other types of complaints by teachers often are valid.

A major problem confronting educators and psychologists is the development of interventions which are effective and yet can be utilized by regular classroom teachers in mainstream environments (Rosenfield, 1979; Witt & Elliott, 1982). Prerequisite to designing such interventions is the identification of factors that are perceived by teachers to impede or facilitate implementation of classroom interventions. Based upon our experience we have found factors such as the amount of teacher time involvement, material resources required, risk to the child, and the degree to which an intervention interferes with other children to be major determiners of whether or not a teacher will utilize an intervention.

A major focus of most classroom intervention studies has been to measure the extent of student behavior change (cf. Workman, Helton, & Watson; 1982). Certainly it is appropriate to evaluate the efficacy of interventions via behavior change of a client; however, recently several authors have

suggested expanding the criteria by which interventions are evaluated (Strupp & Hadley, 1977; Garfield, 1978; Barlow, 1981; Yeaton & Sechrest, 1981; Wolf,1978). All of these researchers, to some degree, have argued for the need to assess the social validity of behavioral procedures. One important dimension of social validation concerns the appropriateness of intervention procedures. Thus, as suggested by Wolf (1978), psychologists need to directly assess the acceptability of their treatment procedures with participants, caregivers, and consumers.

In a series of studies Kazdin (1980a, 1980b, 1981; Kazdin, French, & Sherick, 1981) asked psychological consumers to judge the acceptability of interventions designed for clinic and institutional settings according to the following criteria: (a) whether the treatment was appropriate for a given problem, (b) whether it was fair, reasonable or intrusive, and (c) whether it was consistent with conventional notions of what a treatment should be. Kazdin found consumers of clinical interventions were capable of distinguishing between interventions in terms of acceptability; that reinforcement procedures, such as reinforcement of incompatible behavior were judged as more acceptable than procedures such as time-out; that treatment efficacy was not related significantly to acceptability; that adverse side effects for particular interventions influenced acceptability; and that severity of a behavior problem affected acceptability with all treatments being judged as more acceptable for severe clinical cases. From this line of research it is apparent that a number of factors exist which potentially can influence whether or not an intervention is accepted and hopefully utilized

by consumers.

Since Kazdin's research focused on clinic or institutional settings, it is probable that different or additional factors may influence the acceptability of interventions applied in classrooms by teachers. For example, Witt and Elliott (1982) identified three factors that inhibit the utilization of interventions which have been proven effective but are not practical for use in typical classroom settings. First, some interventions require extra personnel, such as trained observers (e.g., Kazdin & Geesey, 1980), which often are not available to regular teachers. Second, many interventions are not utilized by teachers because the required resources, such as material reinforcers or clock and light systems (e.g., Greenwood, Hops, Walker, Guild, Stokes, Young, Keleman, & Willardson, 1979) are too expensive to be practical for classroom teachers. Finally, but perhaps most importantly, some interventions require too much teacher time. For example, Azrin, Azrin, and Armstrong (1977) reported on an intervention which required teachers to spend 1-to-3-minutes with each student every day, and longer 5-to-10-minute consultations each week. Many teachers may judge this intervention to be unacceptable because the latter requirement alone could require up to five hours of teacher time.

To begin to assess empirically the acceptability of classroom interventions it is necessary to identify factors which influence a teacher's decision to utilize an intervention. Factors which influence teachers' acceptance of an interventions is a topic which has received little attention in the classroom intervention literature. Given that interventions teachers

find unacceptable will be used less frequently, it is important to understand how interventions can be made more acceptable. Thus, the present study was undertaken to identify some of the salient variables related to teacher judgements of acceptability.

Method

Subjects

The subjects were 180 preservice and student teachers. Participants were evaluated in groups during regularly scheduled university classes. Participation was voluntary and no credit was given for participation.

Variables and Research Design

Independent variables. The variables of intervention type, amount of time teacher involvement, and severity of target child's behavior problem were manipulated systematically to determine their effect on preservice teachers' evaluations of classroom interventions. The intervention type variable had two levels, positive and negative. The amount of teacher involvement variable was comprised of three levels; low, medium, and high levels of time involvement. The severity of the behavior problem variable was also comprised of three relative levels; mild, moderate, severe.

Dependent variables. Five dependent variables were generated for each subject by using factor scores from a 20 item scale referred to as the Intervention Rating Profile (IRP). This scale was developed by the first author. For purposes of identifying the measured varibles in this study, we labelled the factors as follows: acceptability, risk, time, other children, and skill. (A detailed discussion of these five factors and their derivation

is contained in the results section.)

Research design. The experimental design employed in this study was a 3 X 3 X 2 fixed factorial. Thus, there were 18 cells in the design with 10 subjects per cell.

Materials

Case descriptions. Information concerning interventions was presented via written case descriptions. Each case description consisted of two parts: the first part described a behavior problem, while the second part presented an intervention which was applied to the behavior problem. The study was designed so three levels of behavior problem severity were manipulated experimentally. The levels of behavior problem severity were determined empirically in pilot work preceding the current investigation. In the pilot study, a list of 20 school behavior problems, of differing severity levels, was presented to 60 preservice teachers. These individuals were asked to rate the severity level of each of the behaviors on a five point scale ranging from "Very Mild Behavior Problem" to "Very Severe Behavior Problem". The three problems used in the study included the ones which ranked overall as the most severe, the least severe, and the one closest to the mean. Thus, the behavior problems used in the case descriptions were daydreaming (lowest level of severity), using obscene language (moderate level of severity), and destruction of others'property (highest level of severity).

The intervention section of the case description was varied along the dimensions of teacher time involvement and type of intervention. Descriptions of the interventions included estimates of the amount of time

required to implement the intervention. An intervention was classified as requiring a low amount of teacher time if it required virtually no preparation and start-up time and if it required very little teacher time to maintain the intervention on an ongoing basis. Interventions utilizing moderate amounts of teacher time required 1-2 hours to get the program going and then 30 minutes to 1 hour per day to maintain the intervention. An intervention was classified as requiring high amounts of teacher time if it required apporximately 1-2 hours to initiate the intervention greater than 1 hour per day to monitor and maintain the program on an ongoing basis. Estimates of the amount of time required for the intervention were stated in the case descriptions.

Interventions were also classified in terms of type: positive or negative. Positive interventions were designed to increase behaviors incompatible with the problem behavior and negative interventions attempted to decrease the problem behavior itself. The following is an example case description used for a child with a mild behavior problem (i.e., daydreaming) and an intervention, categorized as negative (i.e., response cost lottery), requiring a moderate level of teacher time involvement.

> Scott is a ten-year old fifth grader whose teacher is concerned about his frequent daydreaming. Scott spends about a quarter of his classtime staring into space. Because of this, Scott frequently turns in incomplete assignments.
>
> Scott's teacher, Mrs. Barton, has decided to consult with the school psychologist in an effort to reduce Scott's problem behavior. The school psychologist suggests that Mrs. Barton implement the following procedure. She is to

place four small slips of paper on Scott's desk at the beginning of each day. Every time she notices Scott daydreaming she is to remove a slip of paper. Each slip of paper that Scott loses represents a 4 minute reduction in playtime at afternoon recess. If Scott loses all 4 slips in one day, he must stay after school for 15 minutes. This procedure requires approximately one hour for a meeting with the school psychologist, 15 minutes to explain the procedure to Scott, 15 minutes a day to cut out slips of paper, monitor Scotts's behavior, and remove the slips, plus approximately 15 extra minutes per week to stay after school with Scott when he loses all the slips of paper.

The interventions used were classified according to teacher time involvement and interventions type and are displayed in Table 1. Note the token economy and time out interventions are not designed for individuals. Instead, they are to be applied to an entire class. Inclusion of interventions which apply to the entire class is justified since these specific interventions are used frequently and because teachers often prefer interventions which do not single out an individual child.

Insert Table 1 About Here

Instrumentation. The Intervention Rating Profile or IRP was developed to evaluate participants' perceptions of the acceptability of particular interventions. The IRP consists of 20 items which assess the acceptability of an intervention in terms of the amount of teacher time required, impact of the intervention on other children, risk to the target child, and teacher skill needed to implement the intervention. Subjects were asked to respond to the items on a 6-choice Likert-type scale which ranged from "Strongly

Disagree" to "Strongly Agree". To gaurd against the development of a response set, item content was varied such that marking "Strongly Agree" could indicate either a negative or a positive view of the intervention depending upon the wording of a specific question. The reliability of the IRP, using Cronbach's coefficient Alpha, was .91.

Procedure

Each of the 180 subjects was presented with one case description and a copy of the IRP. After reading a case description, subjects would complete the IRP. This task required approximately 5 minutes and was completed successfully by all subjects.

Results

Factor Analysis of the IRP

In order to identify dimensions of acceptability, the IRP was subjected to a principle components factor analysis. Each of the resulting factors contained only those items with a loading of .40 or greater after the factor matrices were rotated to the varimax criterion. The varimax procedure yielded five factors with eigen values greater than unity. The five factors included:

General acceptability (Acceptability). This initial factor was comprised of seven items and accounted for 61% of the variance. Items with high loadings on this factor reflected whether or not the intervention was suitable for the behavior problem to which it was applied and whether it was generally acceptable for classroom use. (Sample item: Most teachers would find the intervention suitable for the behavior problem described.)

Risk of the intervention (Risk). This factor, which included four items, accounted for 12% of the variance and assessed the degree to which interventions were viewed as posing a risk to the child. (Sample item: This intervention would not pose any negative side effects to the child.)

Amount of teacher time required (Time). Four items with high loadings on this factor reflected the degree to which an intervention was acceptable based upon the amount of time it required. The Time factor accounted for 11% of the variance. (Sample item: This intervention is practical in the amount of record keeping it required.)

Effect of the intervention on other children (Other Children). The Other Children factor was comprised of three items and assessed the degree to which an intervention was acceptable or unacceptable in terms of its potential negative effects on other children. This factor accounted for 7% of the variance. (Sample item: This intervention would not be difficult to implement in a classroom with 30 other students.)

Teacher skill(Skill). This final factor, comprised of only two items, accounted for 7% of the variance and reflected the acceptability of an intervention based upon the amount of teacher skill required to implement it. Items on this factor assessed whether the average teacher would have the skill to implement the intervention. (Sample item: Teachers are likely to use this intervention because it requires little training to implement it effectively.)

Analysis of Variance

A three-way fixed-factorial multivariate analysis of variance (MANOVA)

was completed to determine the effects of type of intervention, amount of teacher time, and severity of behavior problem on each of the five dependent variables. A MANOVA was employed rather than five separate ANOVAs to control for the relationships among the dependent variables while the effects of each was being examined. Means and standard deviations for raw scores for each of the five dependent variables are presented in Table 2. Data for dependent variables in each of the subsequent analyses consisted of factor scores, derived from the factor analysis, rather than raw scores. Factor scores were computed as linear summations of the scores for all such items assigned to a factor.

Insert Table 2 About Here

Given our three-way factorial design, there were seven main and interaction effects to evaluate for both multivariate and univariate analysis with respect to each dependent variable. Six of the seven effects resulted in statistically significant multivariate F-ratios, the exception being the main effect for severity of behavior problem. Specifically, the main effects for type of interventions (F= 4.29; $p<.001$) and amount of teacher time (F=2.41;$p<.009$) were clearly significant. The multivariate F-ratios for the two-way interactions were as follows: intervention type X amount of teacher time (F=2.43;$p<.009$), intervention type X severity of behavior problem (F=2.02;$p<.031$), and amount of teacher time X severity of behavior problem (F=1.71;$p<.029$). The three-way interaction amoung intervention type,

severity of the behavior problem, and amount of teacher time also resulted in a significant multivariate F of 1.88 ($p<.012$).

An examination of the separate univariate analyses for each dependent variable across the seven effects provides more specific information about teachers' evaluations of interventions (see Table 3). As indicated in Table 3, each of the dependent variables is affected significantly by at least one of the three independent variables, with Risk being influenced the most and Skill the least. The independent variable with the most pervasive influence was type of intervention, with positive interventions being judged consistently more acceptable than negative interventions. The univariate analyses will be examined separately for each of the dependent variables.

Insert Table 3 About Here

Acceptability. Not surprisingly, the analysis for Acceptability revealed a significant main effect for intervention type ($F(1,162)=12.34; p<.001$), indicating that positive interventions are more acceptable than negative interventions. Also signficant was the intervention type X amount of teacher time involvement interaction ($F(2,162)=5.23; p<.01$). This suggests that positive interventions are viewed as a more acceptable use of teacher time than negative interventions.

Risk. Significant main effects were revealed due to intervention type ($F(1,162)=15.84, p<.001$) and severity of behavior problem ($F(2,162)=7.11, p<.001$). Additionally, the combined effect of these same two

variables resulted in a significant interaction ($F(2,162)=4.24, p<.05$). In general, positive interventions were viewed as less risky (and thus more acceptable) than negative interventions. Further, interventions were rated as posing less risk to the child if the behavior problem was moderate or severe.

Time. For time, positive interventions were viewed as a more acceptable use of time than negative interventions ($F(1,162)=9.49, p<.01$) and interventions requiring low or moderate amounts of teacher time were viewed as more acceptable than those requiring large amounts of time ($F(2,162)=4.21, p<.05$).

Other Children. In the univariate analysis, the only significant main effect for this dependent variable was due to amount of teacher time ($F(2,162)=3.56. p<.05$) indicating that interventions which require large amounts of teacher time are seen as having more deliterious effects on other children than interventions requiring low or moderate amounts of teacher time. The amount of teacher time X severity of the behavior problem interaction was also signficant ($F(4,162)=3.29, p<.05$) suggesting that interventions which are least acceptable, in terms of their effects on the other children in the class, are ones in which the severity of the behavior problem is low and the extra time required for implementation is high. Conversely, interventions which have the least negative side effects on other children are ones in which the severity of the behavior problem is low and the amount of time required to implement the intervention is also low.

Skill. For the dependent variable of Skill the analysis of variance

revealed no significant main effects. The only statistically significant finding was the amount of teacher involvement X behavior problem severity interaction ($F(4,162)=2.55, p<.05$). This result indicates that interventions which require the most skill and training to implement are ones in which the behavior problem is severe and the amount of teacher time is high. Interestingly, the interventions which were seen as requiring the least skill and training to implement are ones in which the the severity of the behavior problem is high and the extra teacher time is lowest.

Discussion

The purpose of the present study was to explore variables which affect teachers' acceptability ratings of classroom interventions. The influences of amount of teacher time required by an intervention, severity of the behavior problem to which an intervention is applied, and type of intervention were examined. One major finding was the discovery that acceptability is not a unitary concept but rather embodies at least five dimensions (i.e., general acceptability, risk, teacher time required, effects on other children, and teacher skill required). Another important finding was that a teacher's decision to use an intervention does not seem to be based upon any one overriding factor, but instead results from a consideration of a complex array of factors. A third outcome of this study was the development of an instrument, the IRP, that was used to assess the acceptability of classroom interventions. The instrument appears to be sensitive to a variety of variables which influence teachers' perceptions and possible utilization of an intervention.

The present findings extend and compliment those of Kazdin (1980a, 1980b, 1981; Kazdin, French, & Sherick, 1981) in two ways. First, the present research was concerned with classrooms whereas Kazdin's work focused on interventions which can be applied in clinic or institutional settings. Second, Kazdin chose to evaluate the acceptability of an intervention in terms of the public's general notions of what an intervention should be. Our purpose has been to assess the acceptability of an intervention in terms of factors influencing a teacher's decision to ultimately use it. Both perspectives on the acceptability of interventions are important and probably are interrelated.

The results from the multivariate analysis suggested that amount of teacher time, severity of the behavior problem, and type of intervention were salient dimensions to consider in evaluating interventions. In general, positive interventions (i.e., those that reinforce appropriate behavior) were viewed as more acceptable than negative interventions (i.e., those that decrease inappropriate behavior). This finding is consistent with Kazdin's (1980a) work. In addition, interventions which require less teacher time were perceived as more acceptable. Surprisingly, the main effect for severity of the behavior problem was not significant. This is in contrast to previous research (Kazdin, 1981) which has indicated that all interventions are rated as more acceptable when the behavior problem is severe. It is possible that a difference in setting in which the intervention is implemented or methodology could account for this result. Kazdin's subjects were exposed to more than one case study whereas subjects in this

investigation evaluated only one. When evaluating multiple case studies, differing levels of behavior problem severity may become more salient.

Of the five individual dependent variables derived from the factor analysis, a general acceptability dimension accounted for the most variance in the factor solution. However, the factor of risk to the child resulted in more significant main and interaction effects. Thus, both of these variables seem to be particularly important determiners of whether or not an intervention will be utilized. For example, subjects evaluated a vignette describing a home-based reinforcement system much more positively in terms of both risk and acceptability than a vignette describing a seclusion time-out procedure. The acceptability of interventions did not appear to differ in terms of the amount of teacher skill required. This result must be interpreted cautiously because the preservice teachers used in this study may not be as sensitive as experienced teachers to the amount of skill required to implement technical classroom interventions.

One implication of these results is that psychologists who consult with teachers about controlling classroom behavior should be aware of a number of different treatments. Through an awareness of a variety of treatments and the conceptual relevance of the treatments (Yeaton & Sechrest, 1981), psychologists will increase the probability of finding an intervention which is both effective and acceptable. This is especially important in light of indications that when teachers think of "intervention" they may select referral to special education as a highly preferred option for children with behavior problems (Algozzine, Ysseldyke, Christenson, & Thurlow, 1982).

Additional research is needed on the acceptability of behavioral interventions in classroom settings. Investigators following the general methodology outlined in the present study could examine the saliency of the same independent variables on different educational personnel, as well as parents, many of whom may participate in the selection of a behavioral intervention for a child. In fact, a relative weakness of the present investigation was the focus on how preservice and student teachers rated interventions. Preservice teachers represent a rather distinct sample which may not allow for broad generalization to more experienced or specially trained teachers. Thus, future research with teachers who have varying amounts of experience and different training (e.g., regular vs. special education) would provide evidence for or against generalization of the present results. Another researchable problem stemming from the present study is the relationship between individual's ratings of acceptability and their actual use of an intervention. Although such research is experimentally more complex, it represents a significant practical issue which bears on the application of the empirical evidence generated in the present investigation.

In conclusion, the major contribution of the present study has been to operationalize some of the important variables which influence whether or not an intervention will be evaluated as acceptable by classroom teachers. In addition a methodology for assessing the acceptability of classroom interventions has been advanced. It is important to evaluate the acceptability of interventions since many effective interventions remain

unused because they are excessively complicated or difficult to administer effectively. Of what use is a behavioral intervention which remains unused? No longer is it appppropriate to design interventions which are only effective. They must also be efficient and capable of being utilized by consultees or the clients. Knowledge of variables which influence teachers' perceptions and utilization of interventions is fundamental to designing effective and efficient interventions for children that get used.

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